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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,935	06/24/2003	Gabor Kaszas	PO-7835/PS-1118	1809
157	7590	06/17/2004	EXAMINER	
BAYER POLYMERS LLC 100 BAYER ROAD PITTSBURGH, PA 15205			TESKIN, FRED M	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,935

Applicant(s)

KASZAS, GABOR

Examiner

Fred M Teskin

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>062403</u> | 6) <input type="checkbox"/> Other: ____. |

Claims 1-8 are currently pending and under examination herein.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over any one of U.S. 4908421 (Mishra et al), U.S. 3242147 (Parker), U.S. 4139695 (Thaler et al), U.S. 4154916 (Wagensommer et al) and U.S. 6274689 (Shaffer et al).

The claimed invention is directed to a process for reducing the cold flow of a polymer having repeating units derived from at least one C₄ to C₇ isomonoolefin monomer, at least one C₄ to C₁₄ multiolefin monomer and optionally further monomers, comprising the step of admixing such monomers in the presence of a catalyst system and optionally an organic nitro compound, wherein the amount of repeating units derived from at least one multiolefin monomer in the polymer is more than 2.0 mol %.

Each of the cited references exemplify processes of preparing polymers by admixing species of the stated monomers in the presence of specific catalyst systems, and wherein the polymers obtained each contain repeating units derived from at least one multiolefin monomer in amounts greater than 2.0 mol %, as claimed.

Thus, Mishra et al exemplify the preparation of isobutylene/isoprene copolymers by admixing the monomers in the presence of a defined catalyst system, and wherein the copolymer products each contain isoprene-derived repeating units in excess of 2.0 mol % and even 2.5 mol %, per claim 2. See Example 6, Expt. Nos. 1-3 and 5-7 (Table 6). Isobutylene and isoprene are species of monomers within claims 1 and 4-6, and as to claim 3, Mishra et al expressly state that the products produced according to the disclosed process are *halogen*-terminated polymers – see col. 4, lines 44-45 and col. 5, lines 35-41.

Similarly, each of the other citations exemplify polymer preparations comprising the “admixing” step of the herein claimed process, and wherein the polymer obtained contains repeating units derived from at least one multiolefin monomer in amounts greater than 2.0 mol %.

In this regard, the following embodiments of the cited references are deemed to fully meet the procedural and/or monomer limitations of the indicated claims:

Claims 1, 2, 4-6 and 8: Parker, Examples 3 (Table III) and 7 (Table VII);

Claims 1, 2, 4, 5 and 8: Thaler et al, Examples 1 and 2 (cols. 15-16 and note col. 15, lines 14-18); and Wagensommer et al, Examples I (Table 2, col. 9), II (Table 4, col. 10), III (Table 6) and IV (Table 8, col. 11); and

Art Unit: 1713

Claims 1, 2, 4 and 8: Shaffer et al, Examples 5 and 8 (Table 1, cols. 10-11), 14 and 15 (esp. col. 8, lines 52-53 and 65-67), 16, 19, 21 and 22 (Table 3) and 23-28 (Table 4).

With regard to claim 8, given that the "further monomer" is stated to be "optional," the claim is construed as readable on admixing the same two monomers (isomonoolefin and multiolefin) as specified in claim 1, and as so construed, is readable on the cited examples of each of the applied references.

As to the object of the claimed process, i.e., reducing cold flow, the rejected claims are readable on the conventional process of admixing isomonoolefin and multiolefin monomers in the presence of a catalyst system, and the preamble of claim 1 is merely directed to the result achieved by admixing the monomers in such proportions that the polymer produced contains repeating units derived from at least one multiolefin monomer in an amount of more than 2.0 mol %. To the extent the prior art does not show recognition of this result, its discovery by applicants is tantamount only to finding a property in the old compositions of the prior art. *Cf., In re Tomlinson*, 150 USPQ 623 (CCPA 1966). Indeed, such result is reasonably deemed to be inevitable in the prior art in view of the identity of preparative step and copolymer composition.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer et al.

Shaffer et al differs from claim 7 only in that the use of a catalyst comprising a dialkylaluminum halide, an alkylaluminum dihalide and at least one of water, aluminoxane and mixtures thereof is not disclosed in a single embodiment.

Nevertheless, Shaffer et al identify species of dialkylaluminum halide, alkylaluminum dihalide and aluminoxane as examples of preferred Lewis acid catalysts, thus indicating the suitability of the individual components of the claimed catalyst for carrying out the disclosed process of copolymerizing isobutylene and an alkenyl styrene monomer (see col. 4, lines 44-60).

It would have been obvious, *prima facie*, to one having ordinary skill in the art to combine a dialkylaluminum halide, an alkylaluminum dihalide and an aluminoxane, each of which is taught by Shaffer et al to be useful for the same purpose (Lewis acid catalysis), to form a composition to be used for the very same purpose; the concept of combining flowing logically from their having been individually taught in the prior art. See, *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980).

No claims are allowed.

Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone

Art Unit: 1713

number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/06-09-04



FRED TESKIN
PRIMARY EXAMINER
1713